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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,476	10/23/2003	Jea-Woan Lee	1567.1059	5031

49455 7590 03/02/2007  
STEIN, MCEWEN & BUI, LLP  
1400 EYE STREET, NW  
SUITE 300  
WASHINGTON, DC 20005

EXAMINER
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WEINER, LAURA S

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/691,476		LEE, JEA-WOAN	
	<b>Examiner</b>		<b>Art Unit</b>	
	Laura S. Weiner		1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 9-26 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 27 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Republic of Korea on 10-25-02. There is a paper filed 7-22-04 stated that the certified copy was sent in but this certified copy is not present in the case. Please send in another copy to be placed in the case.

### ***Response to Arguments***

2. Applicant's arguments filed 1-16-07 have been fully considered but they are not persuasive. Applicants submitted a Declaration Under Rule 131 (a) filed 1-16-07 stating that a copy of the invention disclosure form is attached hereto in which the invention disclosure form disclosing the invention (7-12-02). The Declaration has been received but the invention disclosure form has not be received. Also as explained above, the certified priority document has not been received. This was stated in the non-final office action of 10-16-06. The certified copy of the translation has been received. Therefore, the rejection of claims 1-5, 8, 27 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al. (JP 2002-279972, abstract) in view of Hata (JP 11-307078, translation and abstract). This office action will be a non-final due to missing papers.

***Election/Restrictions***

3. Claims 9-26, 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8-30-06.

***Claim Rejections - 35 USC § 103***

4. Claims 1-5, 8, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al. (JP 2002-279972, abstract) in view of Hata (JP 11-307078, translation and abstract).

Tamura et al. teaches an electrode for a lithium secondary battery comprising an active material film formed mainly of a metal alloyed with Li. The value of (surface roughness Ra of active material film)-(surface roughness Ra of substrate) is 0.1 um or larger.

Tamura et al. discloses the claimed invention except for specifically teaching that a negative electrode tab is attached to the plate on an area having a surface roughness of 0.1-5 um.

Hata teaches a current collecting tab used in an alkali secondary battery having a surface roughness of 0.1-4 um. Hata teaches in the translation on page 3, [0031], that a piece of pure nickel was used as the current collection tab. Only the portion for being welded to a current collecting substrate may be formed so as to have the specified

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surface roughness. If the surface roughness is smaller than 0.1  $\mu\text{m}$ , the surface becomes a smooth surface, the contact resistance with a mix non-coating part of the current collecting substrate is decreased and the generation of Joule heat is decreased.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the surface roughness of the area attaching the negative tab to the plate be 0.1-4  $\mu\text{m}$  because Hata teaches if the surface roughness is smaller than 0.1  $\mu\text{m}$ , the surface becomes a smooth surface, the contact resistance with a mix non-coating part of the current collecting substrate is decreased and the generation of Joule heat is decreased.

***Allowable Subject Matter***

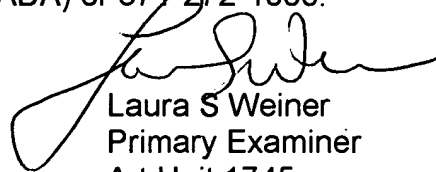
5. Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Laura S Weiner  
Primary Examiner  
Art Unit 1745

February 28, 2007